

CLAIMS

What is claimed is:

1. A method for forming a printing plate comprising a printing plate precursor comprising a radiation-sensitive layer, said radiation sensitive layer exhibiting sensitivity to radiation in a first frequency spectrum and to radiation in a second frequency spectrum other than said first frequency spectrum, the method comprising imagewise exposing said printing plate precursor to said radiation in said first frequency spectrum and exposing to radiation in said second frequency spectrum any areas of said plate subject to undesirable shading during said imagewise exposure.
2. The method according to claim 1 wherein said printing plate is a positive working lithographic printing plate.
3. The method according to claim 1 wherein said printing plate is a negative working lithographic printing plate.
4. The method according to claim 1 wherein said undesirable shading results from applying a clamping device on said precursor during said imagewise exposure of said precursor.
5. The method according to claim 4 wherein said clamping device is transparent to said second frequency radiation.
6. The method according to claim 5 wherein said clamping device comprises clear glass, polymethyl methacrylate, polycarbonate, polyvinyl chloride, glass fiber-reinforced polyester, magnesium fluoride, barium fluoride, calcium fluoride, potassium bromide, lithium fluoride, thallium halides, chalcogenide glass, polycrystalline zinc selenide, zinc sulfide, lanthanide sulfides, fused silica, quartz, UVT acrylic or a combination thereof.

7. The method according to claim 1 wherein the undesirably shaded areas of said plate are identified and exposed to said radiation in said second frequency spectrum prior to imagewise exposing the precursor to the first frequency spectrum radiation.

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8. The method according to claim 1 wherein the undesirably shaded areas of said plate are identified and exposed to said radiation in said second frequency spectrum following the imagewise exposing the precursor to the first frequency spectrum radiation.

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9. The method according to claim 1 wherein the undesirably shaded areas of said plate are identified and exposed to said radiation in said second frequency spectrum during the imagewise exposing the precursor to the first frequency spectrum radiation.

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10. The method according to claim 1 wherein said precursor is heat sensitive and said imagewise exposure comprises imagewise heating said plate precursor layer.

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11. The method according to claim 9 wherein said heat sensitive precursor comprises a photothermal conversion material.

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12. A method for forming a printing plate comprising a heat sensitive printing plate precursor said precursor also exhibiting sensitivity to at least one of visible and ultraviolet radiation, the method comprising exposing by imagewise heating said printing plate precursor and also exposing to at least one of said visible and ultraviolet radiation any areas of said plate undesirably shaded during said imagewise heating exposure of said precursor.

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13. The method according to claim 12 further comprising, following the step of exposing by imagewise heating the printing plate precursor and the step of

exposing any areas of said plate undesirably shaded during said imagewise heating exposure of the precursor, developing said printing plate precursor.

14. The method according to claim 12 wherein said heat sensitive precursor
5 comprises a photothermal conversion material.

15. The method according to claim 12 wherein said undesirable shading results from applying a clamping device on said precursor during said imagewise exposure of said precursor.

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16. The method according to claim 15 wherein said clamping device is transparent to at least one of said visible or ultraviolet radiation.

17. The method according to claim 16 wherein said clamping device
15 comprises clear glass, polymethyl methacrylate, polycarbonate, polyvinyl chloride, glass fiber-reinforced polyester, magnesium fluoride, barium fluoride, calcium fluoride, potassium bromide, lithium fluoride, thallium halides, chalcogenide glass, polycrystalline zinc selenide, zinc sulfide, lanthanide sulfides, fused silica, quartz, UVT acrylic, or a combination thereof.

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18. The method according to claim 13 wherein the undesirably shaded areas of said plate are identified and exposed to said at least one visible or ultraviolet radiation prior to the step of exposing the precursor by imagewise heating.

19. The method according to claim 13 wherein the undesirably shaded areas
25 of said plate are identified and exposed to said at least one visible or ultraviolet radiation during the step of exposing by imagewise heating the precursor.

20. The method according to claim 13 wherein the undesirably shaded areas
30 of said plate are identified and exposed to said at least one visible or ultraviolet

radiation following the step of exposing by imagewise heating the precursor.

21. The method according to claim 20 wherein said exposure to said at least one visible and ultraviolet radiation is performed as said precursor exits a platesetter following exposure to imagewise radiation in said platesetter.

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22. The method according to claim 21 wherein said exposure to said at least one visible and ultraviolet radiation is performed with a fluorescent light source positioned at an exit of said platesetter and extending across said exit.

10 23. A method for forming a printing plate, the method comprising the steps of:

(a) exposing a printing plate precursor comprising a radiation sensitive layer over a support with radiation in a first frequency region and forming exposed and unexposed regions in the radiation sensitive layer,

15 in which the radiation sensitive layer exhibits sensitivity to radiation in the first frequency region and to radiation in a second frequency region, and wherein the first frequency region and the second frequency region are not the same;

(b) exposing at least one of the unexposed regions with radiation in the second frequency region, and forming at least one additional exposed region; and

20 (c) developing the printing plate precursor with a developer to form the printing plate.

24. The method of claim 23 in which the first frequency region is in the ultraviolet, and the second frequency region is in the infrared.

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25. The method of claim 23 in which the first frequency region is in the infrared, and the second frequency region in the ultraviolet.

26. The method of claim 23 in which the exposed regions are removed by
30 the developer.

27. The method of claim 23 in which the unexposed regions are removed by the developer.